NOMLLC Naval Operational Medical Lessons Learned Center

Newsletter

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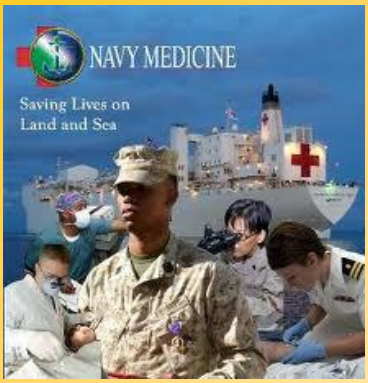

Naval Operational Medical Lessons Learned Center

NOMLLC Website:
https://www.jllis.mil/nomi/

"Learning from those who have gone before."

Inside this issue:

The Naval Operational Medical Lessons Learned Center (NOMLLC) newsletter, like other NOMLLC products addressing a variety of topics, is an "initial impression" summary that identifies key observations and potential lessons from collection efforts. These observations highlight potential shortfalls, risks or issues experienced by units that may suggest a need for change. The observations are not service-level decisions. In addition, some information in this newsletter has been compiled from publicly available sources and is not official Navy policy. Although the information has been gathered from reliable sources, the currency and completeness of the information is subject to change and cannot be guaranteed. Your comments on any topics addressed in this newsletter or the website are welcome. Direct questions/comments to LCDR Mary Graves or Mr. Gerry Williams. (850) 452-7716, DSN: 922-7716

Naval Operational Medical Lessons Learned Program Realignment

Navy Medicine Support Command (NMSC) is now the executive agent for the Naval Operational Medical Lessons Learned Program (NOMLLP) with the Naval Operational Medical Lessons Learned Center (NOMLLC) under NMSC M5. The realignment of NOMLLC to NMSC, an echelon 3 command, will facilitate the collection, identification, analysis, dissemination and integration process to support Navy Medicine's preparedness to conduct current and future operations. NOMLLC remains in Pensacola, FL with LCDR Mary Graves, the new department head of NOMLLC, bringing her diverse operational experience to lead NOMLLC in its expanding role.

Navy Medicine Supports Role 3 Hospitals in Afghanistan

Kandahar Air Facility (KAF) Role 3 Hospital ("Role 3" is NATO equivalent to a "U.S. Level III" facility) has recently moved into a modern, custom-built fortified building on the airbase that serves as the nerve center for the NATO military effort in southwestern Afghanistan. The original Role 3 Hospital was a multipurpose plywood structure located next to the airfield. Over the years, the KAF Role 3 Hospital has become a cutting-edge trauma facility delivering life-saving care to NATO forces, Afghanistan police, and civilians. The KAF Role 3 was under Canadian command from the fall of 2005 to October 2009. During those years, it grew to include eight intensive care beds, 20 ward beds, three operating rooms, eight trauma bays, and full laboratory and diagnostic services to include a CT scanner. In October 2009, the U.S. Navy assumed responsibility for the Role 3 hospital as it moved it into a newer, larger NATO facility, which is one of the most advanced hospitals in Afghanistan. Still a multinational medical unit, the Role 3 employs clinicians from many countries, notably the United States, Canada, Australia, Britain, Denmark, and the Netherlands. Click here, to visit the photo gallery.

Helmand Province, Afghanistan, Camp Bastion Role 3 Hospital is commanded and manned by regular and reserve personnel of the British Army, Royal Navy, and Royal Air Force. More than 85 U.S. Army, Air Force and Navy medical augmentees are assigned to support it with additional assistance from doctors, nurses, and corpsman assigned to Bravo Surgical Company 1st MLG (FWD) stationed at nearby Camp Leatherneck. The partnership between the U.K. and the United States plays an important role in the success of this hospital, but it is not just the U.K. and the U.S. In fact, every military service playing a part in Afghanistan is represented at the hospital, all of them working together on multi-national, multi-service patients. Bastion Hospital is a state of the art facility with an emergency room, multiple surgical suites, intensive care ward, medical/surgical wards, and full ancillary support services which includes, blood banking and CT Scan. Click here, to find out more about Camp Bastion Role 3 Hospital.

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Seasonal Influenza Vaccine Policy (2010-2011)

Click on the above picture to view the message on seasonal influenza for the Surgeon General of the Navy.

BUMED MSG 261205Z Jul 10 provides initial guidance on the acquisition, prioritization, and administration of seasonal influenza vaccine for the 2010-2011 season. Further ordering and detailed administration information will be released in a subsequent message. The H1N1 virus remains a serious threat and is the predominant type of influenza A circulating in the world. This year the NOVEL H1N1 influenza vaccine has been combined with the seasonal influenza vaccine. The seasonal influenza vaccine will protect individuals against H1N1, H3N2 influenza A, and Influenza B. There will be a single source of influenza vaccine via the established DOD centralized distribution system, coordinated and controlled by the Navy Medical Logistic Command (NMLC). Vaccine orders will be tracked via the new web-based vaccine information and logistical system (VIALS) maintained by NMLC. For more information on influenza vaccine visit MILVAX which can be found in the Operational Tool Box Topical Site along with other informational links. Additional information can be found by contacting the Navy & Marine Corps Public Health Center.

BUMED Policy and Guidance Update
Sick Call Screener Program

BUMED Instruction 6550.9B was released 6 July 2010 to provide policy and guidance regarding the qualification, duties, supervision, education, and quality assurance of Navy Sick Call Screeners (SCS) and to standardize the Sick Call Screeners Program (SCSP). The SCSP is available to all Hospital Corpsmen however, personnel deploying as Individual Augmentees or transferring to an operational platform within 180 days, will have priority enrollment. The SCSP consists of lectures, practical hands-on training in physical examination, physical diagnosis and a supervised clinical practicum. Prerequisites for enrollment include: endorsement from chain of command and completion of both Hospital Corpsman Skills Basic (HMSB) training and the NKO online course, Hospital Corpsman Fundamentals, Anatomy and Physiology.

The two primary goals of the SCSP are:

- To improve access to primary care for active duty personnel with minor medical conditions
- To train Hospital Corpsmen for service with operational unit

NOMLLC's Hospital Corpsman Sick Call Training Survey Report (August 2008) highlighted the findings of 1202 respondents (E-5 and below) regarding sick call training, self-assessment of sick call skills and areas for improvement. To find out more, visit our Operational Sick Call Topical Site by clicking here.

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Teleconsultation Program for Deployed Healthcare Providers

Teleconsultation service is provided **only for deployed healthcare professionals** (MD/DO, PA, NP, IDC) to consult on any patient under their care including foreign nationals. Consults are answered 7 days a week with a reply within 24 hours (average turn-around time < 6 hours).

This program started in 2004 due to deployed healthcare providers (HCPs) not having a standardized methodology to receive expert teleconsultation services. It has quickly grown into one of the most sought after services for deployed providers. Navy HCPs utilized this service 26 times beginning in 2004 and in 2010 that number has grown to over 300 teleconsultations from ashore and afloat commands. This accounts for about 18% of all consults submitted, second only to the Army.

There are many program advantages to the teleconsultation system program, which include:

- **Obtain a diagnosis, treatment options, how – to and what – if advice**
- **Depending on the tactical situation, may be the safest way to obtain medical advice**
- **On – line collaboration between specialties**
- **Consultants are often the experts in their field**
- **Average reply time is less than 6 hours.**

For questions contact Project Manager, Chuck Lappan, LTC USA (Retired) Chuck.Lappan@us.army.mil or help.consult@amedd.army.mil. Learn more by viewing the Teleconsultation Topical Site.

U.S. Food and Drug Administration (FDA) Releases Warning for Suspected Counterfeit Combat Application Tourniquets (C-A-T®)

FDA has become aware of suspected counterfeit C-A-T® tourniquets. The suspected counterfeit tourniquets have subtle differences in stitching, printing of the logo and molding of plastic parts. They may be packaged and labeled for a distributor other than the authorized manufacturer or distributors. Preliminary testing has shown that the suspected counterfeit tourniquet does not perform the same as the tourniquet manufactured by Composite Resources. The windlass is weaker in the suspected counterfeit product and breaks or bends before necessary force can be applied to stop blood flow.

- Use only C-A-T® tourniquets manufactured by Composite Resources and purchased from one of the authorized distributors. Others may be counterfeit and may fail in use.
- If you have C-A-T® tourniquets you suspect may be counterfeit, replace them as soon as possible with the genuine devices. If a counterfeit fails, it can endanger a patient's life.
- Notify FDA's Office of Criminal Investigations (OCI) if you suspect your tourniquet is counterfeit by contacting Special Agent, Alex Alvarado at (240) 276-9407).

To view the complete FDA warning, click here. For additional information and photos released by the Fort Sam Houston Public Affairs, click here.

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Combat Surgery: Through the Eyes of Surgeon
"The Operating Rooms Are Full and Pulsatile Neck Bleeding"

This issue features one of the cases from First to Cut which highlights the evaluation and treatment of casualties from the combat surgeon's perspective.

"So there I was, at a FRSS in a MASCAL – the first 4 pts were billed as the worst and 2 of them went straight to the O.R. for ex laps filling the only 2 tables we had – then the next wave came in – one fellow had a pulsatile carotid arterial bleed from his neck, we intubated him and tried manual compression with little success. I needed an OR table ASAP but it would be 20 minutes until we could get in…I took a Foley catheter and placed it into the bleeding neck hole, inflated the balloon and under tension clamped the catheter at the skin with a Kelly clamp – we then had no more significant bleeding and brought him to the O.R and fixed a fragment penetrating wound to the carotid."

Pulsatile arterial bleeding from the neck can give a surgeon quite the adrenal squeeze in the best of conditions. The first consideration should be the airway as hematomas in the neck can distort the trachea and compromise the airway – especially with a combative patient and while you are trying to manually compress the bleeding point. After securing the airway, sedation and placement of a Foley catheter should be considered if an OR is not readily available. The Foley catheter can provide a local tamponade effect. Direct finger compression against the vertebral column can also provide temporary control.

Joint Theater Trauma System (JTTS) Clinical Practice Guidelines (CPG) for Vascular Injury

The treatment of vascular injuries in combat casualties can be a challenging endeavor in a resource limited environment and requires not only technical expertise on the part of the operating surgeon, but also solid judgment on when to perform temporizing maneuvers, vice definitive repairs. Some of the key points include::

- Surgeons at all Level II and III facilities need to be intimately familiar with the use of vascular shunts as a means to stabilize a critically wounded casualty and move them along the continuum of care
- If possible attempt to get a baseline neurologic exam on patients with carotid trauma since it is one of the best predictors of outcome
- Hard signs of vascular injury: expanding hematoma, bruit, thrill, active bleeding, severely ischemic extremity
- Soft signs of vascular injury: proximity of wound to major vessels, history of hemorrhage/shock, non-expanding hematoma, diminished pulse and anatomically related nerve injury

To review the other JTTS CPGs, click here. To learn more about trauma care from the perspective of military surgeons who have deployed to Iraq and Afghanistan, read First to Cut and War Surgery in Afghanistan and Iraq.

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Direct from the Battlefield: Operation Enduring Freedom

A night assault was conducted against a Taliban compound after an offset helicopter insertion followed by a two-hour patrol, mission personnel arrived at the compound and secured the location. The compound was later attacked at daybreak by heavy enemy forces moving in from several sides. During the fire fight a soldier sustained a gunshot wound (GSW) to the abdomen that entered in the left lower quadrant and exited in the right upper quadrant. The ongoing firefight delayed CASEVAC for 2.5 hours and the casualty had to be sustained in the field. A Halo dressing was applied to the wound. The casualty was given 5mg of recombinant factor VIIa intravenously for his presumed non-compressible intra-abdominal hemorrhage. This was the first documented administration of rVIIa by a medic in the field. The casualty's pain was treated with oral transmucosal fentanyl citrate (OTFC), which was not effective, possibly because of his very dry mouth. The casualty was in extreme pain and was becoming agitated due to the pain. He was then treated with 7.5 mg of morphine IV and Versed. Hypothermia prevention was accomplished and 1 gm of Invanz was given. The casualty was then moved to the casualty collection point, which took about 5 minutes, after which the Halo dressing was removed, a HemCon dressing was used to control external bleeding, and the Halo dressing was replaced. He was given another 7.5 mg of morphine IV with unsatisfactory results. The casualty was then treated with 20 mg of IV ketamine with prompt relief of pain. The ketamine succeeded where OTFC and repeated doses of IV morphine had failed. The casualty was also treated for nausea with Zofran. While waiting for evacuation, he went into shock (lost his radial pulse) and was given 500cc of Hextend. The casualty was found at surgery to have both liver and bowel injuries. He survived after a long and complicated recovery. There were no thromboembolic complications. The following observations and comments are provided:

- Rapid evacuation of combat casualties is not always possible. Medics will continue to care for severely wounded casualties in austere locations in situations where evacuation is delayed. They should be trained and equipped with multiple agents for the management of non-compressible hemorrhage. In SFC Alvarez's opinion, the battlefield use of rVIIa saved this casualty's life.
- Medics should carry more rVIIa to provide for multiple casualties and multiple doses during delayed or prolonged evacuation.
- Ketamine worked better than narcotics in this casualty and is less likely to cause hypotension. This agent should be used early when it is indicated.
- Abdominal wounds are hard to pack with hemostatic gauze.
- A hemostatic agent that could be injected into the abdomen would be helpful.
- The Halo chest seal would have worked better if it had been larger.

To view the power point presentation, click here.

Tactical Combat Casualty Care Update on Hypothermia Prevention

Committee on TCCC recommended changes to the hypothermia prevention guidelines in the prehospital combat setting that were approved by the Core Board of the Defense Health Board on 18 August 2010. The TCCC training curriculum will be modified to reflect this change in the near future and posted on the MHS website. To view the TCCC Guidelines with the prevention of hypothermia changes highlighted in **red** , click here**.**

- Replace wet clothes with dry if possible. **Get the casualty onto an insulated surface as soon as possible.**
- **Apply the Ready-Heat Blanket from the Hypothermia Prevention and Management Kit (HPMK) to the casualty's torso (not directly on the skin) and cover the casualty with the Heat-Reflective Shell (HRS).**
- **If an HRS is not available, the previously recommended combination of the Blizzard Survival Blanket and the Ready Heat Blanket may also be used.**
- If above items not available, use dry blankets, poncho liners, sleeping bags or anything that will retain heat.
- **Warm fluids are preferred if IV fluid is required** and keep the casualty dry.

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Center for Disaster and Humanitarian Medicine Guide to Nongovernmental Organizations for the Military

The Center for Disaster and Humanitarian Assistance Medicine (CDHAM) has recently published a guide for understanding nongovernmental organizations (NGOs). The purpose is to orient the military with NGOs: their operations, strengths, limitations, budgets, practices, and other characteristics that make them unique actors in a large and dynamic humanitarian community.

Every NGO is unique: no two have exactly the same objectives, missions, operating procedures, or capacities. To provide a cohesive body of information, generalizations are often made and detail may be sacrificed. This book has been produced specifically for uniformed services personnel, but it may prove useful to others in understanding some of the military-specific issues in foreign aid. The annexes in this book play an important part in constructing an understanding of NGOs and the NGO community. Annex 1 covers the basics for NGOs commonly found in humanitarian emergencies around the world and ones the military are likely to encounter. Designed as a quick reference, annex 2 is a compilation of the most informative websites highlighted in different sections of the book. To review this book, click here. In addition, a more comprehensive and searchable database of NGOs can be found at www.global-health.org.

The *USNS Mercy* (T-AH 19) returned to San Diego, California after a five-month humanitarian deployment. The deployment was part of Pacific Partnership 2010, the fifth in an annual series of U.S. Pacific Fleet humanitarian and civic assistance endeavors.

The concept of Pacific Partnership evolved from the unprecedented international disaster response for countries devastated during the 2004 Asian tsunami. Follow-up missions recognized the benefits derived from cooperation between national governments, militaries, international organizations, and non-governmental organizations during disaster relief operations, as well as in civic assistance projects.

This year's mission focused on providing assistance ashore in a variety of ways, including engineering projects, medical and dental care, participating in subject-matter-expert exchanges and conducting programs to provide humanitarian and civic assistance to Vietnam, Cambodia, Indonesia, Timor-Leste, Palau and Papua New Guinea.

The crew aboard the Mercy was not exclusively from the Navy but also included Air Force and Army personnel. In addition to the military support during the deployment, an additional 130 partner-nation personnel joined the crew, as well as 580 volunteers from 17 nongovernmental organizations. “The total number of personnel on board fluctuated [near] 900.

For this mission, Mercy was outfitted with humanitarian and civic assistance equipment, supplies and a staff augmented with a robust multi-specialized team of preventive medicine personnel, veterinarians, medical and dental teams and engineering personnel. “In addition to performing surgeries aboard the Mercy, they also provided primary health and dental clinics, biomedical repair opportunities, preventive medicine and veterinarian care. To find out more about Pacific Partnership 2010 and previous humanitarian/disaster relief missions, click here.

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United States Government Accountability Office Reports

Enhanced Collaboration and Process Improvements Needed for Determining Military Treatment Facility Medical Personnel Requirements

Military medical personnel, who are essential to maintaining one of the largest and most complex health systems in the nation, are in great demand due to the need to treat injured or ill service members. To determine how well the Department of Defense (DOD) and the services are developing their medical and dental personnel requirements, the Government Accountability Office (GAO) evaluated (1) the extent to which the services have incorporated cross-service collaboration in their medical personnel requirement processes, and (2) the service-specific processes for determining their requirements for military and civilian medical personnel.

GAO recommended that Office Secretary of Defense and the services emphasize a long-term joint approach to medical personnel requirements determination by identifying the common medical capabilities shared across the services and developing cross-service medical manpower standards, where applicable; and that the services take actions to improve their respective medical requirements determination processes. In written comments to a draft of this report, DOD generally concurred with these recommendations. Other topics discussed in this GAO review include:

- Emphasizing Jointness in strategic planning
- Challenges in the services developing military medical personnel requirements
- Current Army and Navy and Air Force medical personnel models
- Joint medical efforts in the Washington, D.C., area

For the full results of this study, click here.

U.S. Southern Command Demonstrates Interagency Collaboration, but Its Haiti Disaster Response Revealed Challenges Conducting a Large Military Operation

The Government Accountability Office (GAO) recently released a report citing U.S. Southern Command (SOUTHCOM) as “having mature interagency processes and coordinating mechanisms”. As evidenced by the earthquakes that shook Haiti in January 2010, the challenges that SOUTHCOM faced required coordinated efforts from U.S. government agencies, international partners, and nongovernmental and private organizations. This report analyses the key attributes that SOUTHCOM exhibits which enhance and sustain collaboration with interagency and other stakeholders, and it evaluates SOUTHCOM’s approach for developing an organizational structure that facilitates interagency collaboration and positions the command to conduct a full range of missions.

The report discusses other successful SOUTHCOM qualities and traits such as:

- Demonstrating practices that enhance and sustain collaboration
- Working with interagency partners to develop mutually reinforcing strategies
- Leveraging capabilities of various partners to address needs
- Command structure reorganized to facilitate collaboration

To read the entire report, click here. For SOUTHCOM lessons learned, click here.

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The Defense Medical Materiel Program Office (DMMPO) recently updated the Joint Deployment Formulary. The Joint Deployment Formulary (JDF) is the recommended list of Pharmaceutical products to be used and ordered by deployed / deploying forces. This list is continually updated to insure that a specific product is still the standard of care and is available for use and ordering. The DMMPO also provides an up-to-date list of deployable medical National Stock Numbers (NSN), and an ICD-9 listing. For more information about deployment medications/pharmacy click here.

Naval Operational Medicine Journal Watch

Many lessons learned from ongoing military medical operations are not formally submitted to military lessons learned centers but are published as reports in medical literature. The Naval Operational Medical Lessons Learned Center has implemented a Journal Watch to ensure that publications relevant to operational medicine are captured. This quarter's featured article is the CRASH-2 study published recently in Lancet online. This paper details the results of a study that examined the use of tranexamic acid in an attempt to reduce death from hemorrhagic shock in trauma patients. CRASH-2: Effects of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant hemorrhage: a randomized, placebo controlled trial. Lancet Online 2010.

Abstract

Background: Tranexamic acid can reduce bleeding in patients undergoing elective surgery. We assessed the effects of early administration of a short course of tranexamic acid on death, vascular occlusive events, and the receipt of blood transfusion in trauma patients.

Methods: This randomized controlled trial was undertaken in 274 hospitals in 40 countries. 20 211 adult trauma patients with, or at risk of, significant bleeding were randomly assigned within 8 h of injury to either tranexamic acid (loading dose 1 g over 10 min then infusion of 1 g over 8 h) or matching placebo. Randomization was balanced by centre, with an allocation sequence based on a block size of eight, generated with a computer random number generator. Both participants and study staff (site investigators and trial coordinating centre staff) were masked to treatment allocation. The primary outcome was death in hospital within 4 weeks of injury, and was described with the following categories: bleeding, vascular occlusion (myocardial infarction, stroke and pulmonary embolism), multiorgan failure, head injury, and other. All analyses were by intention to treat. This study is registered as ISRCTN86750102, Clinical trials.govNCT00375258, and South African Clinical Trial Register DOH-27-0607-1919.

Findings: 10 096 patients were allocated to tranexamic acid and 10 115 to placebo, of whom 10 060 and 10 067, respectively, were analyzed. All-cause mortality was significantly reduced with tranexamic acid (1463 [14.5%] tranexamic acid group vs. 1613 [16.0%] placebo group; relative risk 0.91, 95% CI 0.85-0.97; p=0.0035). The risk of death due to bleeding was significantly reduced (489 [4.9%] vs. 574 [5.7%]; relative risk 0.85, 95% CI 0.76-0.96; p=0.0077).

Interpretation: Tranexamic acid safely reduced the risk of death in bleeding trauma patients in this study. On the basis of these results, tranexamic acid should be considered for use in bleeding trauma patients.

Abstracts for other articles papers of interest identified in the most recent survey of the medical literature may be viewed by clicking here.

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G-Eyes: Military Eyewear System

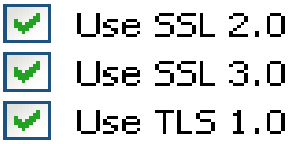
G-Eyes "Military Eyewear System" This link allows authorized personnel in deployed locations to re-order prescription glasses (Frames of Choice (FOC) not included), gas mask inserts and Military Combat Eye Protection (MCEP) prescription lens carriers that were previously ordered through a U.S. Military Treatment Facility or U.S. Military Computer System. You will be asked to enter your SSN and deployed APO/FPO address. Once that is done, you will press the "Submit" button to initiate a search for your previous military eyewear prescriptions. If any prescriptions are found, the server will permit you to send an order request to the nearest optical fabrication laboratory. Once received, the optical laboratory will complete your order and send it to you through the military postal system. Your spectacle frame may be changed due to inventory at the optical lab. Gas mask inserts and MCEP prescription lens carriers will not be changed. You are authorized to order two items per visit to this site. As needed, you may return to this site to order additional spectacles and inserts for your Combat Eye Protection. If you request a pair of glasses, the order will be filled in our most basic civilian frames (LO350 or LO801) because these fit beneath MCEP goggles. After you receive your first pair of civilian style frames from this site, additional orders for glasses will be changed to the brown S-9 spectacle. It may take up to three weeks to receive your order due to demands on the Military Postal System. If the server cannot find your prescription, you will be given further instructions.

NOMLLC NAVAL OPERATIONAL MEDICAL LESSONS LEARNED CENTER

Mission: Naval Operational Medical Lessons Learned Center (NOMLLC) collects, analyzes and disseminates relevant medical observations, insights and lessons learned in support of Navy and Marine Corps operations.

NOMLLC Website Tips:

- Access to the Naval Operational Medical Lessons Learned Center website requires the use of a government issued common access card (CAC).
- Read the User's Pocket Guide for more information about registering and using the NOMLL system.
- What to do if you have trouble getting access to the website and receive the web browser message below: "Internet cannot display the page"
  - Select your tools menu
  - Then select Internet Options
  - Select the advanced tab
  - Under settings scroll down to Security check boxes
  - Make sure the following boxes are checked then click apply



- Contact the NOMLLC Staff at 850-452-7716 (DSN 922-7716) or email us at mllstaff@med.navy.mil

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